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October 19, 2005

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VIA HAND DELIVERY AND ECFS

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Iridium Satellite LLC, Special Temporary Authority, File Nos. SAT-STA-20050923-00180/00181

Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands, IB Docket No. 02-364

Dear Ms. Dortch:

Iridium Satellite LLC ("Iridium"), by its attorneys, hereby responds to Globalstar LLC's ("Globalstar") October 17, 2005 request that the Commission terminate Iridium's special temporary authorizations (the "STAs") to provide service in the 1616-1619.25 MHz band to accommodate the increase in demand for telephone service following Hurricanes Katrina and Rita (the "Request"). As the Commission is aware, Iridium, with Globalstar's consent, has been operating under the STAs to provide service to public safety officials, relief organizations, businesses and the public during the response and rebuilding efforts.

Globalstar's filing is highly unusual. As the Commission was witness to by teleconference on September 2, 2005, it was agreed that Globalstar would contact Iridium directly if interference was seen and verified and the two parties would work together to determine if such interference was from Iridium, from Globalstar or from another source. To this date, Dannie Stamp, COO of Iridium and the 24/7 contact given to Globalstar has never been contacted by Globalstar. In addition, it is standard industry practice for two operational systems who have possible interference issues first to attempt to resolve any interference concerns amongst themselves before bringing them before the Commission. Indeed, if interference is real and "harmful," a satellite operator will be most interested in alleviating its customer's issues as opposed to waiting over a month to file at the FCC.

Furthermore, the extent of any supposed interference is not at all clear from the Request. Globalstar only provides data for one date during which the STAs

were in place. This single date—almost one month ago—on which Globalstar allegedly experienced an interference event is not sufficient to support a generalized conclusion that Iridium's operations are causing harmful interference to Globalstar. Additionally, selection of this date may not be a good indicator of interference under normal conditions because Hurricane Katrina had just hit and Hurricane Rita was heading for the same region.

Data that would be needed for Iridium and even Globalstar to conduct a proper assessment would include: (1) daily performance data from a few weeks before the 2.25 MHz was turned on and a few weeks after it was turned on; (2) identification of the dates of the Globalstar frequency changes (for example, channel 3, which Globalstar states was activated *after* August 4); and (3) spectrum analyzer data from February 2005 ("Figure 1" on page 5 of the Request shows data for February 2005, but Figure 5 on the same page does not).

Even the limited data provided by Globalstar suggests that any interference may be caused by internal Globalstar or third-party sources. For example:

- Globalstar states that its overall Radio Link Failure ("RLF") rate rose from 8.1 percent on August 4,2005 to 13.9 percent on September 22, 2005 (and the rate rose to 26 percent on channel 7). However, Globalstar also states that the Frame Error Rate ("FER") only increased from 3.3 percent to 4.7 percent. This modest increase in FER should not cause such a large increase in RLF, and indicates that Globalstar is likely experiencing other problems.

- In its explanation of the increase in RLF (page 4), Globalstar admits that it was not using all of its channels on August 4, 2005. For example, Globalstar states that Channel 3 was not used on August 4, 2005 but came into use at some later date prior to September 22, 2005. It is possible that intra-system issues related to turning on these channels may have caused the increase in RLF. The fact that an RLF of 8 percent was being experienced prior to the grant of Iridium's STA also lends credence to this theory.

- Globalstar also states that channel 3 had a 14 percent failure rate as of September 22, 2005. However, the lower limit of Iridium's operations is 1616 MHz, which is in the upper region of Globalstar channel 5. It is

extremely unlikely that any interference caused by Iridium could extend as far as Globalstar's channel 3. This clearly implies that there are other causes for Globalstar's reported failure rates. Table 2 also shows an overall Radio link failure of 8.10 percent on August 4, which may indicate that channel 3 is contributing to Globalstar's overall RLF increase.

- Globalstar showed a peak simultaneous call volume of about 80 calls at their gateway, which means 80 calls across all of their beams and all of their channels, combined. They have previously submitted to the FCC that they can handle 60 calls in 1 beam and on 1 channel. Assuming 1 channel per beam, the maximum call capacity should be on the order of 9 times 60, or 540 simultaneous calls. If you spread the reported 80 calls across all 9 of their channels (say 9 calls per channel), then even with 15-20 Iridium calls within a channel, they are still well below their L-band capacity and L-band interference threshold. This also indicates that Globalstar is not properly utilizing all of its extensive spectrum resources to accommodate its increased traffic.

- Globalstar's analysis is internally inconsistent. Figure 5 on page 5 is a spectrum analyzer plot showing external interference to Globalstar channels for 8 different spot beams. Close inspection of Figure 5 shows that the purported interference occurs in channels 1 to 4.[1] The next diagram (incorrectly labeled Figure 1) supposedly shows the number of Iridium users in Globalstar channels. However, these users are clearly shown to be in channels 5 to 9, not in channels 1 to 4.

- Even if Figure 1 on page 5 (showing Iridium traffic in Globalstar channels 9-13) is correct, Iridium has shown in prior submissions that this number of users provides an interference level well below Globalstar's noise floor or intra-system interference threshold, and is therefore insufficient to cause harmful interference to Globalstar.[2]

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[1] The external interference is shown as the "spikes" on the plot. However, close inspection of this plot shows that the "spikes" occur in channels 1 to 4, rather than channels 5-9.

[2] *See, e.g., Reply Comments of Iridium Satellite LLC,* IB Docket No. 02-364 (Sept. 23, 2004).

Figure 5 on the same page, which does not show significant external interference in channels 9-13, supports Iridium's prior showings.

Thus, based on Globalstar's own data, it is likely that the problem is due to sources of interference from parties other than Iridium and/or internal system constraints. Potential contributing factors could include: (1) other emitters in the region; (2) internal Globalstar changes, such as its frequency change on channel 3; (3) increases in average call duration (which would increase the likelihood of a dropped call); (4) concentration of users in and around the areas affected by the hurricanes; and (5) an increase in Globalstar's system traffic.

In sum, Globalstar's Request fails to show that immediate termination of the STAs is justified or timely. Globalstar chose to wait a month after the interference activity shown in its analysis to submit its Request, which suggests that the need for action is hardly pressing nor is the interference "harmful." Furthermore, review of the relevant data is likely to show that the interference is being caused by a party other than Iridium as was the case during operations in the Middle East.[3] Thus, the Commission should permit Iridium to continue operating under the STAs while it works with Globalstar to obtain additional data and to resolve any supposed interference issues.

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[3] Globalstar has previously attempt to attribute its increased Radio Link Failure ("RLF") rate in the 1620.1-1621.35 MHz band to Iridium's shared use of that spectrum pursuant to STA. *Globalstar, L.P. and Globalstar USA, L.L.C. Letter re: Iridium June 9, 2003, Request for Extension of STA*STA-MSC-20030515-00089, SES-MSC-20030515-00666, at 1-2, Attachment at 1-2 (June 11, 2003). As the Commission has noted, however, the International Bureau's Satellite Division has found "no demonstrated interference" between the Iridium and Globalstar systems. *See Review of Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands*, Report and Order, Fourth Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 13,356, 13,369 (¶ 29) (2004) ("*Big LEO Spectrum Sharing Order and FNPRM*"); *Modification of Licenses Held by Iridium Constellation, LLC and Iridium US LP*, Order, 18 FCC Rcd 20023 (Sat. Div., Int'l Bur. 2003).

Please direct any questions regarding this matter to the undersigned.

Sincerely,

/s/ R. Michael Senkowski

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Counsel to Iridium Satellite LLC

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